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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,281	02/02/2007	Hack-Churl You	4251-4025	2764

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Locke Lord Bissell & Liddell LLP  
Attn: IP Docketing  
Three World Financial Center  
New York, NY 10281-2101

EXAMINER
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HANLEY, SUSAN MARIE

ART UNIT	PAPER NUMBER
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1651

NOTIFICATION DATE	DELIVERY MODE
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05/07/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptopatentcommunication@lockelord.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/578,281	YOU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	SUSAN HANLEY	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-3, 7-15, drawn to a method of manufacturing pulp by immersing *Rhodophyta* in an extraction solvent to dissolve the agar gel, converting the dissolved agar gel into a fiber by reacting the dissolved agar gel with a solvent, curing the fiber and pulping the cured fiber and a paper made thereof.

Group II, claim(s) 4, drawn to a method of manufacturing pulp by immersing *Rhodophyta* in an extraction solvent to dissolve the agar gel and pulping the collected pulp material after removal of the solution containing the dissolved agar gel.

Group III, claim(s) 5 and 6, drawn to a method of manufacturing pulp by immersing *Rhodophyta* in an extraction solvent to dissolve the agar gel, collecting the pulp material from the dissolved portion of the agar gel, curing the pulp material and pulping the cured pulp material.

Group IV, claim(s) 1,16 and 17, drawn to a method for manufacturing paper from a cured, pulped fiber and a paper made thereof.

Group V, claim(s) 1, 18 and 19, drawn to a method for manufacturing paper from a cured, pulped fiber and an added prepared wood pulp to make paper and a paper made thereof.

Group VI, claim(s) 4 and 20, drawn to a method for making paper by preparing a pulp by extracting with a solvent to dissolve the agar gel and pulping the collected pulp material after removal of the solution containing the agar gel and manufacturing paper with a prepared wood pulp.

The inventions listed as Groups I-VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or

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corresponding special technical features for the following reasons: The Groups have different special technical features:

The special technical feature of Group I involves the steps of manufacturing pulp by immersing *Rhodophyta* in an extraction solvent to dissolve the agar gel, converting the dissolved agar gel into a fiber by reacting the dissolved agar gel with a solvent, curing the fiber and pulping the cured fiber and a paper made thereof.

The special technical features of Group II is manufacturing pulp by immersing *Rhodophyta* in an extraction solvent to dissolve the agar gel and pulping the collected pulp material after removal of the solution containing the dissolved agar gel.

The special technical feature of Group III is manufacturing pulp by immersing *Rhodophyta* in an extraction solvent to dissolve the agar gel, collecting the pulp material from the dissolved portion of the agar gel, curing the pulp material and pulping the cured pulp material.

The special technical feature of Group IV is the manufacture of paper from an extracted fiber that is cured and pulped.

The special technical feature of Group V is the manufacture of paper from a prepared wood pulp and an extracted fiber that is cured and pulped and a prepared wood pulp.

The special technical features of Group VI is the manufacture of paper from a pulp from an extracted *Rhodophyta* and a prepared wood pulp.

Group II lacks the special technical features of group I that involve making a fiber and a curing step.

Group III lacks the special technical feature of Group I because it does not make a fiber that is pulped and cured.

Group I lacks the special technical feature of Group IV of the steps of making paper from a pulp.

Group I lacks the special technical feature of Group V that adds a prepared wood pulp to the extracted, cured fiber pulp to make paper.

Group I lacks the special technical feature of Group VI that is drawn to making paper from an extracted, collected pulp and combining it with a prepared wood pulp to make paper.

Group II lacks the special technical feature of Group III that has a curing step.

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Group II and III lack the special technical features of Groups IV, V and VI that involve the manufacturing steps to make paper.

Group IV lacks the special technical features of Group V and VI because the manufacturing does not include the addition of a prepared wood pulp.

Group VI lacks the special technical feature of group V that involves the of making paper from a pulp that is converted into a fiber that is pulped and cured.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

*Gelidium amansii*

*Gracilaria vetrucosa*

*Cottonii*, or

*Spinoswn*

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

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are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

The species correspond to claim 14

The following claim(s) are generic: claims 1-3, 7-13 and 15.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The various species have different biochemical characteristics that make them unique from one another.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN HANLEY whose telephone number is (571)272-2508. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sandra Saucier/  
Primary Examiner, Art Unit 1651

/Susan Hanley/  
Examiner, Art Unit 1651